CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. R9-2005-0008
NPDES PERMIT NO. CA0107239

WASTE DISCHARGE REQUIREMENTS
FOR THE

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

SAN DIEGO COUNTY

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The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. Since 1910, the University of California, Scripps Institution of Oceanography (SIO), has been discharging waste seawater and urban runoff to the Pacific Ocean, adjacent to the San Diego Marine Life Refuge, near La Jolla, California. The San Diego Marine Life Refuge is designated as an *Area of Special Biological Significance* (ASBS).

2. On November 11, 1999, the Regional Board adopted Order No. 99-83, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107239, Waste Discharge Requirements for the University of California, Scripps Institution of Oceanography. Order No. 99-83 regulates the discharge of up to 1.008 million gallons per day (mgd) of waste seawater to the Pacific Ocean. Order No. 99-83 expired on November 11, 2004.

3. On March 21, 1974, the State Water Resources Control Board (State Board) designated the San Diego Marine Life Refuge as an ASBS. The action by the State Board also prohibited any discharge to an ASBS if such discharge could alter natural water quality conditions. The SIO discharges into the San Diego Marine Life Refuge.

4. On November 22, 2002, SIO submitted to the State Board an application in request for an exception to the 2001 California Ocean Plan (Ocean Plan). The Ocean Plan prohibits the discharge of wastes to areas designated as ASBS unless an exception to the prohibition is granted by the State Board.

5. On July 22, 2004, the State Board adopted Resolution No. 2004-0052, which adopted a Mitigated Negative Declaration for a conditional exception to the Ocean Plan prohibition against waste discharges to the San Diego Marine Life ASBS. The exception establishes requirements and conditions applicable to the discharges into the ASBS from the seawater system at SIO and from the municipal storm water collection system. The conditions in Resolution No. 2004-0052 are incorporated into this Order.

6. On May 14, 2004, the University of California, SIO submitted a Report of Waste Discharge (RWD) in application for the renewal of Order No. 99-83, NPDES Permit No. CA0107239.

7. On February 1, 2008, SIO submitted a request for modification of this Order (Order No. R9-2005-0008). The modification request included a request to discontinue monitoring for certain constituents, increase the dilution factor, eliminate wet weather bacteria, exchange the benthic marine life survey for Bight '08 participation, and revise the acute toxicity requirements.

8. The flow-through seawater system at SIO has a pumping capacity of 1.25 mgd. The seawater is pumped from the end of Scripps Pier and flows by gravity via a flume (supported by the pier) to two settling tanks. Outfall Nos. 004a and 004b discharge intake

seawater settling tank overflow and sand filter backwash water respectively. The seawater is pumped to sand filters to remove suspended matter before it is pumped to either the north or south storage tank. The seawater is circulated through various aquaria before it is discharged back to the ocean via Outfalls 001, and 003. The wastewater from all outfalls discharge onto the beach where it flows across the sand and into the San Diego Marine Life Refuge ASBS. Outfall 002 discharges municipal storm water runoff.

9. Order No. 99-83 established an initial dilution factor of two to one (2:1) for the copper discharges from the SIO waste seawater discharges into the surf zone. The dilution factor was originally determined using best professional judgment but does not represent the results of an empirical study or the application of a valid computer model. This Order requires SIO to perform a study to determine the initial dilution and dispersion of the discharge during storm and non-storm periods. ~~This Order applies the 2:1 dilution factor to all constituents in the discharges at SIO. The dilution factor may be modified by this Regional Board upon completion and evaluation of the dilution and dispersion study required by this Order.~~

SIO conducted a dilution and dispersion study of effluent from the five permitted outfalls. The SEDXPORT hydrodynamic modeling system was used to numerically simulate dry weather and wet weather case scenarios. Modeling results indicate the minimum dilution factor inside the surf zone exceeds 15:1 more than 96 % of the time.

Based on the review of the dilution model and Natural Water Quality Committee (NWQC) responses, the dilution factor was increased from 2:1 to 7:1. The Regional Board finds that the minimum dilution factor, of 7:1, observed during the study, would be the most protective of the San Diego Marine Life Refuge ASBS. Effluent limits were recalculated to reflect the change in dilution factor. The residual chlorine limitation was revised to be consistent with Resolution 2004-0052.

10. The five outfalls that discharge waste seawater and/or storm water to the San Diego Marine Life Refuge ASBS are identified below. The discharge volumes were estimated based on pumping rates. SIO is currently in the process of installing meters on the seawater intake system as well as on Outfalls 001, 003, and 004b.

    (a) Outfall 001: Discharges approximately 470,000 to 700,000 gallons per day (gpd) of waste seawater that has been circulated through the Stephen Birch Aquarium, the National Marine Fisheries aquaria, Hubbs Hall aquaria, and intermittent tank discharges from the Hydraulic Laboratory and Keck Center for Ocean Atmosphere Research. Storm water is also discharged from this Outfall.

    (b) Outfall 002: This Outfall does not discharge wastewater from the seawater system, but does discharge municipal storm water.

(c) Outfall 003: Discharges approximately 140,000 to 200,000 gpd of waste seawater from the Experimental Aquarium and an additional 140,000 to 210,00 gpd from the Ring Tank Complex when it is in use. The Ring Tank Complex is in use approximately twelve to sixteen weeks during the year. Storm water also discharges from this Outfall.

(d) Outfall 004a and 004b: Discharges approximately 45,000 to 140,000 gpd of waste seawater from holding tank overflow and sand filter backwash respectively. These Outfalls do not discharge storm water.

11. During storm events, storm water runoff enters the facility's storm drains and discharges from Outfall 002. Storm water runoff also commingles with the waste seawater discharges before being discharged to the San Diego Marine Live Refuge ASBS via Outfalls 001 and 003.

12. The seawater circulated through the various aquaria may have been treated with copper sulfate and antibiotics to maintain a suitable aquaria environment. The seawater system water is eventually discharged at Outfalls 001 and 003. Since copper sulfate and antibiotics are discharged in the waste stream from Outfall 001, it is necessary to require monitoring for copper and for chronic toxicity in the effluent from Outfall 001 and to establish effluent limitations for these constituents as required by the 2001 Ocean Plan.

13. State Board Resolution No. 2004-0052 includes a condition for a committee to establish the definition of natural water quality conditions.

14. The discharger has reported that on occasion the intake water from the Pacific Ocean used by SIO has contained copper concentrations in excess of the ambient copper concentration for the Pacific Ocean cited in the 2001 California Ocean Plan. Elevated concentrations of copper in the intake water can result in the wastewater effluent to exceed the effluent limitations for copper established in this Order. Consequently, prior to considering an enforcement action for violations of effluent limitations, this Regional Board will consider the source of the constituents in the effluent and ambient water quality conditions that might have contributed to the elevated concentrations.

15. SIO conducted a reasonable potential analysis (RPA) using the Reasonable Potential Calculator Software (RPCalc, Version 2.0) and effluent monitoring data obtained between December 2004 and August 2006. The RPA calculations were based on the results from 39 discharge samples collected during wet and dry weather in 2004, 2005, and 2006. The RPA concluded that 65 constituents in the monitoring and reporting program do not have the potential to cause, or contribute to, an excursion above the Ocean Plan Table B water quality objectives.

The purpose of an RPA is to provide direction to the Regional Water Board in determining if a pollutant discharge causes, has the reasonable potential to cause, or

contribute to an excursion above Table B water quality objectives in accordance with 40 CFR 122.44 (d)(1)(iii). Data obtained by SIO for the RPA was representative of various discharge conditions and effectively characterized the pollutant discharge from the facility. ~~Although the RPA concluded there is no effluent limits required for 65 constituents, the Ocean Plan requires periodic monitoring of Table B constituents. Monitoring of all constituents will continue to be required to ensure that the beneficial uses of the San Diego Marine Life Refuge ASBS are maintained.~~ Under the Ocean Plan, an RPA analysis result of Endpoint 2 does not require effluent monitoring; however, the Regional Water Board may require occasional monitoring for the pollutant. As SIO's NPDES permit expires within 14 months, in February 2010, and the Endpoint 2 results of the RPA analysis suggest effluent limitations are not required for certain pollutants, the monitoring conducted by SIO over the last three years meets the requirements of the Ocean Plan. No further monitoring is contemplated in this permit cycle for constituents with a calculated RPA endpoint of 2.

16. **This Order previously required SIO to conduct three bacterial studies, within four-years of the adoption of the Order, to assess the impact, sources, and transport of bacteria during different conditions: once during dry weather, once during wet weather, and once when mammals are present in the Ring Tank. To date, SIO has completed the dry weather bacterial monitoring study. In general, bacteria levels were low.**

    Evaluation of the dry weather bacterial monitoring indicates that resources which were to be used for the additional bacterial monitoring studies would be better allocated towards other monitoring efforts that would further assess impacts to the ASBS as a result of the discharge. The NWQC has also reviewed the bacterial monitoring results and concluded the bacterial monitoring was not strongly correlated with the ASBS marine life beneficial use for the La Jolla area.

    In addition, SIO conducts weekly bacterial monitoring within the surf-zone stations. Discharge monitoring found low values of enterococcus and fecal coliforms, with moderately low values of total coliform. Requirements for surf-zone monitoring will remain unchanged.

17. **Section C.4.e of this Order requires SIO to submit a quantitative survey of benthic marine life within four and a half-years after adoption of the Order. SIO will be participating in the Southern California Bight 2008 Regional Monitoring Program for Areas of Special Biological Significance, which includes a benthic marine survey, and this participation shall satisfy the Requirement of Section C.4.e. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. The deadline for submitting the results of the benthic marine life survey will be adjusted to correspond with the Southern California**

Bight 2008 Regional Monitoring Program Schedule.

18. Compliance monitoring for the acute toxicity objective (TUa) in Table B is required under the Ocean Plan. The Regional Board and State Water Resources Control Board understand the discrepancy in the toxicity equation related to results having higher survivals than controls, however, until changes are made in the Ocean Plan, permit requirements will remain unchanged. The Ocean Plan is in the process of being amended. Upon amendment of the Ocean Plan, the Regional Board will reevaluate the toxicity requirements of this Order.

19. The State Board adopted a revised Water Quality Control Plan, Ocean Waters of California, 2001 (2001 Ocean Plan) on November 16, 2001. The 2001 Ocean Plan contains water quality objectives for the following parameters in order to protect the beneficial uses of the Pacific Ocean:

(a) General Provisions,
(b) Bacterial Characteristics,
(c) Physical Characteristics,
(d) Chemical Characteristics,
(e) Biological Characteristics, and
(f) Radioactivity.

20. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

(a) Industrial Water Supply,
(b) Water Contact Recreation,
(c) Non-contact Water Recreation,
(d) Aesthetic Enjoyment,
(e) Navigation,
(f) Commercial and Sport Fishing,
(g) Mariculture,
(h) Preservation and Enhancement of Areas of Special Biological Significance (ASBS),
(i) Rare and Endangered Species,
(j Marine Habitat,
(k) Fish Migration,
(l) Fish Spawning, and
(m) Shellfish Harvesting.

21. The *Comprehensive Water Quality Control Plan Report, San Diego Basin (9)* (Basin Plan) was adopted by this Regional Board on September 8, 1994. Subsequent revisions to the Basin Plan have also been adopted by this Regional Board and subsequently approved by the State Board.

22. The Basin Plan establishes the following beneficial uses for the Pacific Ocean:

    (a) Industrial Service Supply,
    (b) Navigation,
    (c) Water-contact Recreation,
    (d) Non-contact Water Recreation,
    (e) Commercial and Sport Fishing,
    (f) Preservation of Biological Habitats of Special Significance,
    (g) Wildlife Habitat,
    (h) Rare, Threatened, or Endangered Species,
    (i) Marine Habitat,
    (j) Aquaculture,
    (k) Migration of Aquatic Organisms,
    (l) Spawning, Reproduction, and/or Early Development, and
    (m) Shellfish Harvesting.

23. The regulated discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Board Resolution No. 68-16. The impact on water quality will be insignificant provided the discharger complies with the conditions listed in this Order as established by State Board Resolution No. 2004-0052.

24. Effluent limitations, national standards of performance, toxic and pretreatment effluent standards and ocean discharge criteria established pursuant to Sections 301, 302, 306, 307, 308 and 403 of the Clean Water Act and amendments thereto, are applicable to the discharge.

25. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto.

26. This Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    (a) The beneficial uses to be protected and the water quality objectives required to meet those beneficial uses.
    (b) Past, present and probable future beneficial uses of water.
    (c) Environmental characteristics of the hydrologic unit under consideration, including the quality of water available thereto.
    (d) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
    (e) Economic considerations.
    (f) The need for developing housing within the region.
    (g) The need to prevent nuisance.

27. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) of the Public Resources Code Section 21100, et seq. in accordance with California Water Code Section 13389.

28. This Regional Board has notified the discharger and all known interested parties of its intent to prescribe waste discharge requirements for the existing discharge.

29. This Regional Board in a public meeting heard and considered all comments pertaining to the existing discharge.

IT IS HEREBY ORDERED, that the University of California, Scripps Institution of Oceanography (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. Discharges of wastes in a manner or to a location that have not been specifically authorized by this Order, or for which valid waste discharge requirements are not in force, are prohibited.

2. Compliance with the waste discharge prohibitions contained in the Basin Plan and listed in Attachment A hereto is required as a condition of this Order.

3. The discharge of any radiological, chemical or biological warfare agent, or radioactive waste to the ocean is prohibited.

4. The dumping or deposition of oil, trash or other industrial waste into the ocean or adjacent to the ocean in any manner that may permit it to be washed into the ocean is prohibited.

5. The discharge of industrial waste other than seawater that has been pumped from the Pacific Ocean and circulated through the Institution's aquaria as discussed in the Findings of this Order is prohibited.

6. The discharge of a seawater volume in excess of 1.25 mgd is prohibited unless the discharger obtains revised waste discharge requirements for the proposed increase in flow.

B. DISCHARGE SPECIFICATIONS

1. Effluent discharged from SIO must be essentially free of:

   (a) Material that is floatable or will become floatable upon discharge.

   (b) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

   (c) Substances that will accumulate to toxic levels in marine waters, sediments or biota.

   (d) Substances that significantly decrease the natural light to benthic communities and other marine life.

   (e) Materials that result in aesthetically undesirable discoloration of the ocean surface.

C. SPECIAL CONDITIONS

The following Special Conditions implement the Limitations, Report and Studies, Prohibitions, and Provision required by State Board Resolution No. 2004-0052.

1. Numerical Effluent Limitations for Outfalls 001, 003, 004a, and 004b

~~a. Effective upon adoption of this Order, the dry weather discharges of waste seawater from Outfalls 001, and 003 in excess of the limitations listed *Table 1. Table A Effluent Limitations* are prohibited. (State Board Resolution No. 2004-0052, 3.a)~~

~~b. Effective three years after the adoption of this Order, the discharges of (1) waste seawater, and/or (2) storm water that co-mingles or mixes with the waste seawater discharges in Outfall 001, and 003, and (3) the seawater system discharges from 004a or 004b in excess of the limitations listed in *Table 1. Table A Effluent Limitations, Table 2. Protection of Marine Aquatic Life Effluent Limitations for the Seawater System Discharges, Table 3. Protection of Human Health Noncarcinogens Effluent Limitations for Seawater System Discharges,* and *Table 4. Protection of Human Health Carcinogens Effluent Limitations for Seawater System Discharges* are prohibited.~~

~~During the three-year period before the effective date of effluent limitations stated above, the discharger shall review monitoring data for exceedences of the effluent limitations and take necessary actions to reduce the respective concentrations in the discharges.~~

Effective upon adoption of ~~this addendum~~ Resolution No. R9-2008-0139 , the discharges of (1) waste seawater, and/or (2) storm water that co-mingles or mixes with the waste seawater discharges in Outfall 001, and 003, and (3) the seawater system discharges from 004a or 004b in excess of the limitations listed in *Table 1. Table A Effluent Limitations, Table 2. Protection of Marine Aquatic Life Effluent Limitations for the Seawater System Discharges, Table 3. ~~Protection of Human Health-Noncarcinogens Effluent Limitations for Seawater System Discharges,~~* and ~~*Table 4. Protection of Human Health-Carcinogens Effluent Limitations for Seawater System Discharges*~~ are prohibited.

Table 1. Table A Effluent Limitations.

Constituent	Units	Monthly Average (30 day)	Weekly Average (7 day)	Maximum at any time
Oil & grease	mg/L	25	40	75
Suspended solids	mg/L	60	NA	120
Settleable solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	pH units	Within limits of 6.0 - 9.0 at all times.		

Note: mL/L = milliliters per liter mg/L = milligrams per liter

Table 2. Protection of Marine Aquatic Life Effluent Limitations for Seawater System Discharges.

Constituent	Units	6-Month Median	Daily Maximum (Endnote 1)	Instantaneous Maximum (Endnote 3)
~~Arsenic~~	~~µg/L~~	~~18~~	~~90~~	~~234~~
~~Cadmium~~	~~µg/L~~	~~3~~	~~12~~	~~30~~
~~Chromium (hexavalent)~~[1]	~~µg/L~~	~~6~~	~~24~~	~~60~~
Copper	µg/L	~~5~~ **10**	~~32~~ **82**	~~86~~ **226**
~~Lead~~	~~µg/L~~	~~6~~	~~24~~	~~60~~

1. ~~The discharger may, at its option, meet this limitation as a total chromium limitation.~~

Constituent	Units	6-Month Median	Daily Maximum (Endnote 1)	Instantaneous Maximum (Endnote 3)
~~Mercury~~	~~µg/L~~	~~0.239~~	~~0.959~~	~~2.399~~
~~Nickel~~	~~µg/L~~	~~15~~	~~60~~	~~150~~
~~Selenium~~	~~µg/L~~	~~45~~	~~180~~	~~450~~
~~Silver~~	~~µg/L~~	~~1.78~~	~~8.08~~	~~20.68~~
Zinc	µg/L	~~44~~ **104**	~~224~~ **584**	~~584~~ **1544**
~~Cyanide~~[2]	~~µg/L~~	~~3~~	~~12~~	~~30~~
Total chlorine residual[3]	µg/L	~~6~~ **16**	~~24~~ **64**	~~180~~ **480**
~~Ammonia (as N)~~	~~µg/L~~	~~1800~~	~~7200~~	~~18000~~
Acute toxicity (Endnote 4)	TUa	N/A	0.3	N/A
Chronic toxicity	TUc	N/A	3	N/A
~~Phenolic compounds (non-chlorinated)~~	~~µg/L~~	~~90~~	~~360~~	~~900~~
~~Chlorinated phenolics~~	~~µg/L~~	~~3~~	~~12~~	~~30~~
~~Endosulfan~~[4]	~~µg/L~~	~~0.027~~	~~0.054~~	~~0.081~~

~~2 If the discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 412 F, G, and H (Standard Methods for the Examination of Water and Wastewater, Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation, most recent edition).~~

3 The effluent concentration and mass emission rate limitations for total chlorine residual are based on a continuous discharge of chlorine. Effluent concentration limitations for total chlorine residual, which are applicable to intermittent discharges not exceeding 2 hours, shall be determined through the use of the following equations:

$$\log Co = -0.43 (\log x) + 1.8$$

$$Ce = Co + Dm (Co - Cs)$$

where:

Co = the concentration (in ug/L) to be met at the completion of initial dilution
x = the duration of uninterrupted chlorine discharge in minutes
Ce = the effluent concentration limitation (in ug/L) to apply when chlorine is being intermittently discharged
Dm = the minimum probable initial dilution
Cs = the background seawater concentration = 0

~~4 Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.~~

Constituent	Units	6-Month Median	Daily Maximum (Endnote 1)	Instantaneous Maximum (Endnote 3)
~~Endrin~~	~~µg/L~~	~~0.006~~	~~0.012~~	~~0.018~~
~~HCH~~[5]	~~µg/L~~	~~0.012~~	~~0.024~~	~~0.036~~
Radioactivity[6]	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subsection 4, Group 3, Article 1, Section 30253 of the California Code of Regulations.			

Note: µg/L = micrograms per liter

Table 3. Protection of Human Health-Noncarcinogens Effluent Limitations for Seawater System Discharges.

Constituent	Units	Monthly Average (30-day) (Endnote 2)
~~Acrolein~~	~~µg/L~~	~~660~~
~~Antimony~~	~~µg/L~~	~~3600~~
~~Bis(2-chloroethoxy) methane~~	~~µg/L~~	~~13.2~~
~~Bis(2-chloroisopropyl) ether~~	~~µg/L~~	~~3600~~
~~Chlorobenzene~~	~~µg/L~~	~~1710~~
~~Chromium (III)~~[4]	~~µg/L~~	~~570,000~~
~~Di-n-butyl phthalate~~	~~µg/L~~	~~10,500~~
~~Dichlorobenzenes~~[7]	~~µg/L~~	~~15,300~~
~~Diethyl phthalate~~	~~µg/L~~	~~99,000~~
~~Dimethyl phthalate~~	~~µg/L~~	~~2,460,000~~
~~4,6-dinitro-2-methylphenol~~	~~µg/L~~	~~660~~

~~5 HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.~~

6 The 1997 Ocean Plan refers to limits specified in Title 17, Division 5, Chapter 4, Group 3, Article 3, Section 32069 of the California Code of Regulations. The referenced section has since been repealed and the limitations set forth in this Order will be substituted. According to State Board staff, the change will be reflected in subsequent Ocean Plan revisions.

~~7 Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.~~

Constituent	Units	Monthly Average (30-day) (Endnote 2)
~~2,4-dinitrophenol~~	~~µg/L~~	~~12~~
~~Ethylbenzene~~	~~µg/L~~	~~12,300~~
~~Fluoranthene~~	~~µg/L~~	~~45~~
~~Hexachlorocyclopentadiene~~	~~µg/L~~	~~174~~
~~Nitrobenzene~~	~~µg/L~~	~~14.7~~
~~Thallium~~	~~µg/L~~	~~6~~
~~Toluene~~	~~µg/L~~	~~255,000~~
~~Tributyltin~~	~~µg/L~~	~~0.0042~~
~~1,1,1-trichloroethane~~	~~µg/L~~	~~1,620,000~~

Table 4. Protection of Human Health-Carcinogens Effluent Limitations for Seawater System Discharges.

Constituent	Units	Monthly Average (30-day)
~~Acrylonitrile~~	~~µg/L~~	~~0.3~~
~~Aldrin~~	~~µg/L~~	~~0.000066~~
~~Benzene~~	~~µg/L~~	~~17.7~~
~~Benzidine~~	~~µg/L~~	~~0.000207~~
~~Beryllium~~	~~µg/L~~	~~0.099~~
~~Bis(2-chloroethyl) ether~~	~~µg/L~~	~~0.135~~
~~Bis(2-ethylhexyl) phthalate~~	~~µg/L~~	~~10.5~~
~~Carbon tetrachloride~~	~~µg/L~~	~~2.7~~
~~Chlordane~~[8]	~~µg/L~~	~~0.000069~~
~~Chlorodibromomethane~~	~~µg/L~~	~~25.8~~
~~Chloroform~~	~~µg/L~~	~~390~~

8 ~~Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.~~

Constituent	Units	Monthly Average (30-day)
DDT[9]	µg/L	~~0.00051~~ **0.00136**
~~1,4-dichlorobenzene~~	~~µg/L~~	~~54~~
~~3,3' dichlorobenzidine~~	~~µg/L~~	~~0.0243~~
~~1,2-dichloroethane~~	~~µg/L~~	~~84~~
~~1,1-dichloroethylene~~	~~µg/L~~	~~2.7~~
~~Dichlorobromomethane~~	~~µg/L~~	~~18.6~~
~~Dichloromethane~~	~~µg/L~~	~~1350~~
~~1,3-dichloropropene~~	~~µg/L~~	~~26.7~~
~~Dieldrin~~	~~µg/L~~	~~0.00012~~
~~2,4-dinitrotoluene~~	~~µg/L~~	~~7.8~~
~~1,2-diphenylhydrazine~~	~~µg/L~~	~~0.48~~
~~Halomethanes[10]~~	~~µg/L~~	~~390~~
~~Heptachlor[11]~~	~~µg/L~~	~~0.00015~~
~~Heptachlor epoxide~~	~~µg/L~~	~~0.00006~~
~~Hexachlorobenzene~~	~~µg/L~~	~~0.00063~~
~~Hexachlorobutadiene~~	~~µg/L~~	~~42~~
~~Hexachloroethane~~	~~µg/L~~	~~7.5~~
~~Isophorone~~	~~µg/L~~	~~2190~~
~~N-nitrosodimethylamine~~	~~µg/L~~	~~21.9~~
~~N-nitrosodi-N-propylamie~~	~~µg/L~~	~~1.14~~
~~N-nitrosodiphenylamine~~	~~µg/L~~	~~7.5~~
PAHs[12]	µg/L	~~0.0264~~ **0.0704**

9 DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

~~10~~ ~~Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.~~

~~11~~ ~~Heptachlor shall mean the sum of heptachlor and heptachlor epoxide.~~

12 PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

Constituent	Units	Monthly Average (30-day)
~~PCBs[13]~~	~~µg/L~~	~~0.000057~~
TCDD equivalents[14]	µg/L	~~0.0000000117~~ **0.0000000312**
~~1,1,2,2-tetrachloroethane~~	~~µg/L~~	~~6.9~~
~~Tetrachloroethylene~~	~~µg/L~~	~~6~~
~~Toxaphene~~	~~µg/L~~	~~0.00063~~
~~Trichloroethylene~~	~~µg/L~~	~~81~~
~~1,1,2-trichloroethane~~	~~µg/L~~	~~28.2~~
~~2,4,6-trichlorophenol~~	~~µg/L~~	~~0.87~~
~~Vinyl chloride~~	~~µg/L~~	~~108~~

Note: µg/L = micrograms per liter

2. Narrative Effluent Limitations for Outfall 002

Whenever the analyses of municipal storm water discharges from Outfall 002 exceeds the effluent limitations listed in *Table 1. Table A Effluent Limitations, Table 2. Protection of Marine Aquatic Life Effluent Limitations for the Seawater System Discharges, Table 3.*

~~13 PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.~~

~~14 TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.~~

~~Isomer Group~~	~~Toxicity Equivalence Factor~~
~~2,3,7,8-tetra CDD~~	~~1.0~~
~~2,3,7,8-penta CDD~~	~~0.5~~
~~2,3,7,8-hexa CDDs~~	~~0.1~~
~~2,3,7,8-hepta CDD~~	~~0.01~~
~~octa CDD~~	~~0.001~~
~~2,3,7,8 tetra CDF~~	~~0.1~~
~~1,2,3,7,8 penta CDF~~	~~0.05~~
~~2,3,4,7,8 penta CDF~~	~~0.5~~
~~2,3,7,8 hexa CDFs~~	~~0.1~~
~~2,3,7,8 hepta CDFs~~	~~0.01~~
~~octa CDF~~	~~0.001~~

Protection of Human Health-Noncarcinogens Effluent Limitations for Seawater System Discharges, and *Table 4. Protection of Human Health-Carcinogens Effluent Limitations for Seawater System Discharges* the discharger shall perform the following task:

a. review its Storm Water Management Plan/Program (SWMP) and modify the SWMP as necessary to reduce the concentrations of those constituents that exceed the effluent limitations;
b. after modifying the SWMP, sample and analyze the next storm water runoff event for the specific constituents that exceeded the effluent limitations, and compare to previous monitoring data and evaluate for best management practices (BMP) effectiveness and improvement; and
c. document the review and the modifications to the SWMP, and document the sampling analysis and comparison.

The discharger does not have to repeat the procedures listed above for continuing or recurring exceedences of the same constituent unless directed to by this Regional Board. (State Board Resolution No. 2004-0052, 3.p)

3. Bacterial Characteristics

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline the following bacterial objectives shall be maintained throughout the water column:

a. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 mL (10 per mL); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 mL (10 per mL), and provided further that no single sample when verified by a repeat sample taken within 48-hours shall exceed 10,000 per 100 mL (100 per mL).

b. The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 mL nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 mL.

c. If a surf zone sample consistently exceeds a coliform objective or consistently exceeds a geometric mean enterococcus density of 24 organisms per 100 mL for a 30-day period or 12 organisms per 100 mL for a six month period, the discharger shall conduct a survey to determine if its discharge is the source of the contamination. The geometric mean shall be a moving average based on no less than five samples 30-day period, spaced evenly over the time interval.

d. Based on the first year of monitoring results, this Regional Board may modify the frequency or the locations for bacteria monitoring.

4. Reports and Studies

a. An advisory committee created by the State Board, Chief of the Division of Water Quality, and composed of State and Regional Board staff, a representative from UCSD/SIO, and two scientist selected by the Regional Board from an academic organization other than UCSD/SIO shall define *Natural Water Quality* in the receiving water, seaward of the surf zone. The committee shall meet annually. The committee shall review the monitoring data and advise this Regional Board whether or not natural water quality is being altered in the ASBS because of the discharges from SIO. (State Board Resolution No. 2004-0052, 3.a)

b. Within 6-months of the adoption of this Order, the discharger must submit a report to this Regional Board evaluating alternatives and associated costs, and the feasibility of such alternatives, to the current discharges (seawater systems) to the ASBS. The report must include, but not be limited to, alternatives such as partial or complete diversion to the sewer, alternative treatment techniques, pollutant minimization, and source control to eliminate the discharge of copper, and to reduce the discharge of other antibiotics and treatment additives. The report must also include a discussion of alternatives, associated costs and feasibility of moving the waste seawater outfalls to locations outside of the ASBS. (State Board Resolution No. 2004-0052, 3.b)

c. Within 6-months of the adoption of this Order, the discharger must submit a revised Storm Water Management Plan/Program (SWMP) that describes the necessary measures to be taken by SIO to prohibit non-storm water urban runoff (i.e. any discharge of urban runoff to a storm drain that is not entirely composed of storm water), except those discharges associated with fire fighting or other catastrophic events and the reduction of pollutants in storm water discharges to the ASBS. The SWMP is subject to the approval of this Regional Board. (State Board Resolution No. 2004-0052, 3.f & g)

d. The SWMP must include the following:
   i. Identify all known entry points for urban runoff entering the SIO storm water conveyance system,
   ii. Identify all known entry points for the discharges associated with the seawater system,
   iii. Identify any other entry points for discharges to the storm water conveyance system,
   iv. Identify the storm water conveyance system discharge locations,
   v. A procedure to locate any illegal discharges to the storm water conveyance system,
   vi. A procedure to revise the maps and SWMP,
   vii. A description of measures to eliminate non-storm water discharges to the storm water conveyance system, including interim measures necessary to reduce non-

storm water discharges until all non-storm water discharges are eliminated by January 1, 2007,

viii. A description of storm water discharges (chemical and physical characteristics) and how the storm water pollutants will be reduced by implementing Best Management Practices (BMP),

ix. A description of the BMP and an implementation schedule for the BMP,

x. A description of the annual reduction in storm water discharge pollutants (due to reduction in the volume or reduction in concentration of pollutants) caused by the implementation of the BMP, and

xi. The implementation schedule must be developed to ensure that non-structural BMP are implemented within one-year of the approval date by this Regional Board of the revised SWMP. (State Board Resolution No. 2004-0052, 3.g, h, i, and j)

e. ~~Within four and a half years of the adoption of this Order, the discharger must submit a quantitative survey of benthic marine life. This Regional Board, in consultation with the State Board Division of Water Quality, must approve the survey design. (State Board Resolution No. 2004-0052, 3.k)~~

A quantitative survey of benthic marine life shall be conducted during the life of this permit. The Regional Board, in consultation with the State Board Division of Water Quality, must approve the survey design. The discharger may participate in a Regional Monitoring program in lieu of an individual benthic marine life survey. The survey design for Regional Monitoring shall also be approved by the Regional Board, in consultation with the State Board Division of Water Quality.

The Discharger shall submit a monitoring report containing all available data by August 9, 2009. If all monitoring data is not available by the above referenced date, the Discharger shall include, in the monitoring report, and explanation for the missing data and time schedule for the anticipated date of completion. Data for the survey of benthic marine life shall be submitted no later than 6 months from the day the data becomes available.

f. Within four and a half-years of the adoption of this Order, a bioaccumulation study using sand crabs (*Emerita analoga*) and mussels (*Mytilus californianus*) must be conducted to determine the concentrations of metals near field and far field (up and down coast, and offshore) in the ASBS. This Regional Board, in consultation with the Division of Water Quality, must approve the study design. Based on the study results, the Regional Board, in consultation with the Division of Water Quality, may limit the bioaccumulation test organisms, required in subsequent permits, to only sand crabs or mussels. (State Board Resolution No. 2004-0052, 3.l)

g. Within 30-days of becoming aware that receiving water monitoring results indicate that storm water discharges are causing or contributing to an alteration of natural water quality in the ASBS, the discharger must submit a report to this Regional Board. This Regional Board may require modifications to the report. The report must include the following:

i. Identify those constituents in storm water that alter natural water quality,
ii. Describe BMP that are currently being implemented,
iii. Describe the BMP that are planned for in the SWMP, and additional BMPs that may be added to the SWMP,
iv. Include a new or modified implementation schedule.
v. Within 30 days following approval of the report by this Regional Board, the discharger must revise its SWMP to incorporate any new or modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.
vi. The implementation of non-structural BMP must occur within one year of the approval by the Regional Board of the revised SWMP.
vii. Structural BMP must be implemented as soon as practicable.
viii. If the discharger has complied with the procedures described above and is implementing the revised SWMP, then the discharger does not have to repeat the same procedure for continuing or recurring exceedances of the same constituent. (State Board Resolution No. 2004-0052, 3.p)

h. Within two-years of the adoption of this Order, the discharger must submit a report that determines the initial dilution and dispersion of the discharge during storm water discharges, and during non-storm water discharges. The report may include a study that is empirical or uses a model. (State Board Resolution No. 2004-0052, 3.q)

i. Within two-years of the adoption of this Order, the discharger must submit a report describing necessary administrative and engineering controls that result in a negligible risk of the release of exotic species, including foreign pathogens (parasites, protozoa, bacteria, and viruses). The administrative and engineering measures must be developed in consultations with the Department of Fish and Game. (State Board Resolution No. 2004-0052, 3.s)

~~j. Within four-years of the adoption of this Order the discharge must conduct three bacterial studies to assess the impact, sources, and transport of bacteria during different conditions: once during dry weather, once during wet weather, and once when mammals are present in the Ring Tank. Each of the three studies shall be conducted over a five day period, during which sampling will be conducted concurrently from the outfall discharges, beach sediments, the surf zone, and nearshore, plus two stations outside the zone of influence of the outfalls. Monitoring shall be conducted as specified in *Table 5. Sampling Plan for Each Bacterial Study* to detect variability due to tides, temperature, or other factors. These studies should~~

provide information on potential risks, sources, and natural or human-induced variability that weekly or monthly samples typically cannot resolve. It would also help inform the design of future monitoring to best fit the conditions of this area. Equivalent bacterial monitoring conducted by the County of San Diego may be submitted to fulfill portions of this study requirement.

The study results shall be compiled and submitted to this Regional Board within four and a half-years of the adoption of this Order. The bacterial study shall use the sampling plan listed in *Table 5. Sampling Plan for Each Bacterial Study*. This sampling plan may be modified by this Regional Board.

Table 5. Sampling Plan for Each Bacterial Study.

Station	Location	Frequency	Number of samples
S1 (surf zone)	~ 1000 feet south of SIO Pier	4/day X 5 days	20
S2 (surf zone)	~ 250 feet south of SIO Pier	4/day X 5 days	20
S3 (surf zone)	~ 500 feet north of SIO Pier	4/day X 5 days	20
S4 (surf zone)	~ 2000 feet south of SIO Pier	4/day X 5 days	20
S5 (surf zone)	~ 1500 feet north of SIO Pier	4/day X 5 days	20
Outfall 001	Outfall 001 discharge	4/day X 5 days	20
Outfall 003	Outfall 003 discharge	4/day X 5 days	20
Outfall 004b	Outfall 004b discharge	4/day X 5 days	20
N1 (nearshore)	30 ft depth opposite S1	2/day X 5 days	10
N2 (nearshore)	30 ft depth opposite S2	2/day X 5 days	10
N3 (nearshore)	30 ft depth opposite S3	2/day X 5 days	10
N4 (nearshore)	30 ft depth opposite S4	2/day X 5 days	10
N5 (nearshore)	30 ft depth opposite S5	2/day X 5 days	10
Sediment 1	High tide line opposite S1	2/day X 5 days	10
Sediment 2	High tide line opposite S2	2/day X 5 days	10
Sediment 3	High tide line opposite S3	2/day X 5 days	10
Sediment 4	High tide line opposite S4	2/day X 5 days	10
Sediment 5	High tide line opposite S5	2/day X 5 days	10

~~Station~~	~~Location~~	~~Frequency~~	~~Number of samples~~
~~Avenida de la Playa~~	~~Surf zone north of boat ramp~~	~~2/day X 5 days~~	~~10~~
~~Penasquitos lagoon~~	~~Surf zone south of outlet~~	~~2/day X 5 days~~	~~10~~
		~~Total number of samples =~~	~~280~~

5. Prohibitions

   a. The discharges shall not alter the *Natural Water Quality* conditions, seaward of the surf zone, as define by an advisory committee listed in *Reports and Studies 2.a* section of this Order. (State Board Resolution No. 2004-0052, 3.a)

   b. The discharge of Formalin is prohibited. (State Board Resolution No. 2004-0052, 3.b)

   c. Beginning on January 1, 2007, the discharges of non-storm water urban runoff (i.e., any discharge of urban runoff to a storm drain that is not composed entirely of storm water), except those associated with fire fighting or other catastrophic events, are prohibited. (State Board Resolution No. 2004-0052, 3.f)

   d. On February 9, 2010, the discharge of all seawater or storm water wastes to the ASBS are prohibited unless the discharger applies for and receives an exception to the Ocean Plan prohibition on discharges to an ASBS.

6. Provisions

   a. The discharger must minimize chemical concentrations of additives, including antibiotics, in the effluent. (State Board Resolution No. 2004-0052, 3.b)

   b. The use of copper as a treatment additive in the open seawater system must be eliminated as soon as practicable; alternatively the discharge of copper additives must be eliminated as soon as practicable through the treatment of effluent prior to discharge. (State Board Resolution No. 2004-0052, 3.b)

c. All additives to the seawater at the Birch Aquarium must be minimized to prevent the alteration of natural water quality conditions in the receiving water. (State Board Resolution No. 2004-0052, 3.b)

d. Effluent and receiving water analysis for copper must employ an approved analytical method with a minimum limit that allows for the determination of compliance with the specified effluent limitation (currently Inductively Coupled Plasma/ Mass Spectrometry). (State Board Resolution No. 2004-0052, 3.c)

e. The discharger must develop and implement administrative and/or engineering controls that result in a negligible risk of the release of exotic species, including foreign pathogens (parasites, protozoa, bacteria, and viruses). (State Board Resolution No. 2004-0052, 3.s)

D. RECEIVING WATER LIMITATIONS

1. The discharge of wastewater from the SIO shall not cause violations of the water quality objectives set forth in the 2001 Ocean Plan, Chapter II.

E. PROVISIONS

1. Pursuant to the CWC Section 13383, the discharger shall comply with Monitoring and Reporting Program No. R9-2005-0008.

2. The discharger shall comply with the *Standard Provisions* contained in Attachment B.

3. If the discharge consistently exceeds the effluent limitations in *Special Conditions C.1* of this Order for Acute Toxicity or Chronic Toxicity, the discharger shall conduct a toxicity reduction evaluation (TRE). The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

4. The following sections of 40 CFR are incorporated into this permit by reference.
   a. 122.5 *Effect of a permit*
   b. 122.21 *Application for a permit*
   c. 122.22 *Signatories to permit applications and reports*
   d. 122.41 *Conditions applicable to all permits*
   e. 122.61 *Transfer of permits*
   f. 122.62 *Modification or revocation of permits*
   g. 122.63 *Minor modifications of permits*
   h. 122.64 *Termination of permits*

5. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.

6. The discharger must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a Report of Waste Discharge application.

7. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

8. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

   a. Violation of any terms or conditions of this Order;
   b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

   The filing of a request by the discharger for modification, revocation and reissuance, or termination of this order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

9. Notwithstanding *Provision E.8* above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollution in this Order, this Order shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the discharger so notified.

10. In addition to any other grounds specified herein, this permit shall be modified or revoked at any time if, on the basis of any new data, this Regional Board determines that continued discharges may cause unreasonable degradation of the marine environment.

11. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean

Water Act or amendments thereto, the Regional Board will revise and modify this Order in accordance with the more stringent standards.

12. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

13. This Order is not transferable to any person except after notice to this Regional Board. This Regional Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. The discharger shall submit notice of any transfer of this Order's responsibility and coverage to a new discharger as described under *Reporting Requirement F.4*.

14. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, nor protect the discharger from its liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue its waste discharge.

15. The discharger shall allow this Regional Board, or an authorized representative, or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and

    d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.

16. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and

maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

17. In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.

18. A copy of this Order shall be posted at a prominent location at the SIO, and shall be available to operating personnel at all times.

19. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

F. REPORTING REQUIREMENTS

1. This Order expires on February 9, 2010. If the discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the discharger must apply for and obtain new waste discharge requirements and must apply for and obtain an Ocean Plan exception from the State Board. The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such dates, as application for issuance of new waste discharge requirements.

2. The discharger shall file a new Report of Waste Discharge not less than 180 days prior to the following:

    a. Addition of any industrial waste to the discharge or the addition of a new process or product resulting in a change in the character of the wastes.

    b. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).

c. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).

d. Increase in flow beyond that specified in this Order.

e. Other circumstances which result in a material change in character, amount, or location of the waste discharge.

f. Any planned physical alterations or additions to the permitted facility.

3. The discharger shall give advance notice to this Regional Board of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.

4. The discharger must notify this Regional Board, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgment that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable after the transfer date.

5. The discharger shall comply with the attached *Monitoring and Reporting Program No. R9-2005-0008*. Monitoring results shall be reported at the intervals specified in *Monitoring and Reporting Program No. R9-2005-0008*.

6. The discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to this Regional Board within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. This Regional Board, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrences must be reported to this Regional Board within 24 hours:

a. Any upset which causes the effluent limitations of this order to be exceeded.

b. Any violation of any prohibition of this Order.

7. The discharger shall notify this Regional Board as soon as it knows or has reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic or non-toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels:"

      (1) One hundred micrograms per liter (100 µg/l);

      (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

      (3) Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge submitted in application for this Order in accordance with 40 CFR 122.21(g)(7); or

      (4) The level established by this Regional Board in accordance with 40 CFR 122.44(f).

   b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic or non-toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      (1) Five hundred micrograms per liter (500 µg/l);

      (2) One milligram per liter (1 mg/l) for antimony;

      (3) Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge submitted in application for this Order in accordance with 40 CFR 122.21(g)(7); or,

      (4) The level established by this Regional Board in accordance with 40 CFR 122.44(f).

8. The discharger shall furnish to this Regional Board, within a reasonable time, any information which this Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order, or to determine compliance with this Order. The discharger shall also furnish to this Regional Board, upon request, copies of records required to be kept by this Order.

9. The discharger shall provide adequate notice to this Regional Board of the following:

   a. Any new introduction of pollutants to the discharge.

   b. Any substantial change in the volume or character of pollutants being introduced into the discharge.

   c. For the purpose of this requirement, adequate notice shall include information on (1) the quality and quantity of waste introduced into the discharge, and (2) any anticipated impact of the change on the quantity or quality of effluent discharged to the Pacific Ocean.

10. Where the discharger becomes aware that they failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to this Regional Board, they shall promptly submit such facts or information.

11. All applications, reports, or information submitted to this Regional Board shall be signed and certified.

   a. All Reports of Waste Discharge shall be signed as follows:

      (1) **For a corporation**: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

      (2) **For a partnership or sole proprietorship**: by a general partner or the proprietor, respectively; or

      (3) **For a municipality, State, Federal or other public agency**: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (a) the chief executive officer of the agency, or (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

b. All reports required by this Order, and other information requested by this Regional Board shall be signed by a person described in *paragraph a.* of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph a. of this reporting requirement;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and,

(3) The written authorization is submitted to this Regional Board.

c. If an authorization under *paragraph b.* of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph b.* of this reporting requirement must be submitted to this Regional Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Any person signing a document under *paragraph a. or b.* of this reporting requirement shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

12. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (40 CFR Part 2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental

Protection Agency, Region IX. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

13. Reports required to be submitted to this Regional Board shall be sent to:

Industrial Compliance Unit
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123-4340

Notifications required to be provided to this Regional Board shall be made to:

Telephone - (858) 467-2952 or
Facsimile - (858) 571-6972

b. Reports required to be submitted to the State Board shall be sent to:

State Water Resources Control Board
Discharge Monitoring Report Processing Center
P.O. Box 671
Sacramento, California 95812

G. NOTIFICATIONS

1. CWC Section 13263(g) states:

No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

2. The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the Clean Water Act. [CWC Sections 13385, and 13387]

Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws.

Except as provided for in 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the CWA.

3. Any noncompliance with this permit constitutes violation of the California Water Code and is grounds for denial of an application for permit modification. (Also see 40 CFR 122.41(a))

4. This Order shall become effective 10 days after the date of its adoption, provided the U.S. EPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

H. ENDNOTES

1. Daily Maximum
   The daily maximum effluent limitation shall apply to the results of a single grab sample or a single composite sample collected over a period of 24 hours.

2. Monthly Average
   The monthly average shall be the arithmetic mean, using the results of analyses of all samples collected during any 30-consecutive calendar day period. For other definitions, refer to Appendix I of the 2001 Ocean Plan.

3. Instantaneous Maximum
   The instantaneous maximum shall apply to grab sample determinations.

4. Acute Toxicity
   a. Acute Toxicity (TUa)
      Expressed in Toxic Units Acute (TUa)
      TUa = 100/96 hour LC 50%

   b. Lethal Concentration 50% (LC 50)
      LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96 hour LC 50 due to greater than 50% survival of the test species in 100% waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Compliance with the acute toxicity effluent limitation shall be determined by short term (acute) toxicity tests on undiluted effluent using an established protocol, e.g., American Society for Testing and Materials (ASTM), American Pubic Health Association, USEPA, or State Board, such as the 2001 Ocean Plan specifications.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order originally adopted by the California Regional Water Quality Control Board, San Diego Region on February 9, 2005 and amended on November 12, 2008.

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JOHN H. ROBERTUS
Executive Officer